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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/782,855

02/23/2004

Young-sup Kim

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EXAMINER

PHAN, TUANKHANH D

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/782,855	<b>Applicant(s)</b> KIM, YOUNG-SUP	
	<b>Examiner</b> TUAN-KHANH PHAN	<b>Art Unit</b> 2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

The Amendment, filed on 11/07/2008, has been entered and acknowledged by the Examiner. Claims 1-12 are pending.

### *Response to Arguments*

Applicant's arguments with respect to claim 11/07/2008 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajan et al. (US Pub. 2004/0062248), hereinafter Nagarajan in view of Lu et al. (US Pub. 2003/0081664), hereinafter Lu.

Regarding claims 1 and 9, Nagarajan teaches a method of managing a sliding window (i.e. **maintaining a sliding window**, para 0009, lines 1-9), comprising: (a) receiving and IP packet (para [0006], lines 1-3; data packets being received wherein IP packet is inherent); (b) determining whether or not a sliding window, used for determining whether or not the received IP packet is to be transmitted or abandoned (i.e. **accepted or rejected**, para 0010, lines 7-20), is full of IP packets; and (c) updating

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sequence numbers stored in the sliding window by adding a size of the sliding window or predetermined amount to each of the sequence numbers if the sliding window is full of IP packets (i.e. **updated by adding sequence number to the size of sliding window**, para 0033, lines 1-3; para 0027, lines 8-9);

While Nagarajan discloses a window is full of packets, Nagarajan does not explicitly disclose packets wherein the sliding window is full when a number of packet received is equal to the size of the sliding window; however, in the same field of sliding window, Lu discloses a window is full when a number of packet received is equal to the size of the sliding window (¶ [0054], lines 5-6 and 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Lu's feature into Nagarajan's disclosure for the motivation of recovery option to be performed and security measures to be enhanced.

Regarding claim 2, Nagarajan and Lu disclose a method of managing a sliding window, Nagarajan further teaches comprising: (a) setting the size and sequence number information of a sliding window (i.e. **setting the window size**; Figure 2, lines 7; para 0028, lines 1-10); (b) receiving an IP packet and reading a sequence number included in the received IP packet (i.e. **receiving a packet and comparing the sequence number**, para 0010, lines 10-15); (c) determining whether or not the sequence number of the received IP packet is within a range of sequence numbers of the sliding window set in (a) (i.e. **whether the current packet falls within the sliding window**, para 0009, lines 1-9); (d) if the sequence number of the received IP packet is within the range of the sequence numbers of the sliding window, transmitting the

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received IP packet to a specified network layer and otherwise, abandoning the received IP packet (i.e. **determining whether to accept or reject the packet**, para 0010, lines 7-20); (e) determining whether or not the sliding window is full of IP packets (para 0028, lines 1-10); and (f) updating the sliding window if the sliding window is full of IP packets (i.e. **updated by adding sequence number to the size of sliding window**, para 0033, lines 1-3; para 0027, lines 8-9).

Regarding claim 3, Nagarajan and Lu disclose the method of claim 2, Nagarajan further teaches wherein in (a), leftmost and rightmost values of the sliding window are set to 0 and 1 (para 0025, lines 10-17), respectively, and the size of the sliding window is set to n (para 0025, lines 1-10).

Regarding claim 4, Nagarajan and Lu disclose the method of claim 3, wherein if the sliding window is full of IP packets in (f), the sliding window is updated by adding a size of the sliding window set in (a) to each of the sequence numbers stored in the sliding window (para 0033, lines 1-4).

Regarding claim 5, Nagarajan and Lu disclose the method of claim 2, Nagarajan further teaches wherein in (a), leftmost and rightmost values of the sliding window are set to 0 and 1 (para 0025, lines 10-17), respectively, the size of the sliding window is set to n (para 0025, lines 1-10), and the extent to which each of the sequence numbers stored in the sliding window is to be increased is set to m (para 0025, lines 1-10; para 0028, lines 1-10).

Regarding claim 6, Nagarajan and Lu disclose the method of claim 5, Nagarajan further teaches wherein if the sliding window is full of IP packets in (f), the sliding

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window is updated by adding  $m$  to each of the sequence numbers stored in the sliding window (para 0025, lines 1-10; para 0028, lines 1-10).

Regarding claim 7, Nagarajan discloses an apparatus for managing a sliding window, comprising: a sequence number information reading unit operable to receive an IP packet and read a sequence number included in the received IP packet (abstract; (para 0009, lines 1-9); memory operable to store sequence number information of a sliding window (para 0112, lines 1-9); and a comparison unit operable to compare the sequence number read by the sequence number information reading unit with the sequence number information of the sliding window (para 0010, lines 7-20), transmit the received IP packet to a specified network layer if the sequence number read by the sequence number information reading unit is within a range of sequence numbers stored in the sliding window, abandon the received IP packet otherwise, determine whether or not the sliding window is full of IP packets, and update the sliding window if the sliding window is full of IP packets (para 0010, lines 7-20); while Nagarajan discloses a window is full of packets, Nagarajan does not explicitly disclose packets wherein the sliding window is full when a number of packet received is equal to the size of the sliding window; however, in the same field of sliding window, Lu discloses a window is full when a number of packet received is equal to the size of the sliding window (¶ [0054], lines 5-6 and 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Lu's feature into Nagarajan's disclosure for the motivation of recovery option to be performed and security measures to be enhanced.

Regarding claim 8, Nagarajan and Lu disclose the apparatus of claim 7, Nagarajan further teaches wherein the comparison unit is operable to update the sliding window by adding a size of the sliding window or a predetermined value to each of the sequence numbers stored in the sliding window (para 0010, lines 7-20).

Regarding claim 10, Nagarajan and Lu disclose the method of claim 1, Lu further discloses wherein sequence numbers are updated only if the sliding window is full of IP packets (¶ [0054], lines 5-6 and 12).

Regarding claim 11, Nagarajan and Lu disclose the method of claim 1, Nagarajan further discloses wherein once the sliding window is full, a count of the number of IP packets received is reset and the method is repeated (¶ [0098]).

Regarding claim 12, Nagarajan and Lu disclose the method of claim 2, Nagarajan further discloses wherein sequence numbers are updated only when the sliding window is full of IP packets, and wherein once the sliding window is full, a count of the number of IP packets received is reset and the method is repeated (¶ [0098]).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN-KHANH PHAN whose telephone number is (571)270-3047. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKP

/Hung T Vy/

Primary Examiner, Art Unit 2163